

SEQUENCE LISTING

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<120> METHOD FOR PRODUCING HAEMIN PROTEINS USING PLANT CELLS,
 RESULTING PROTEINS AND PRODUCTS CONTAINING SAME

<130> 8076.147USWO

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<141> 1998-06-09

<150> PCT/FR96/01123

<151> 1996-07-17

<150> 95/08615

<151> 1995-07-17

<160> 33

<170> PatentIn Ver. 2.1

<210> 1

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic:
 pBIOC21

<400> 1

agctgattaa ttaaggcgcg ccacgcgtta ac

32

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<211> 32

<212> DNA

<213> Artificial Sequence

<220>

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pBIOC21

<400> 2
aattgttaac gcgtggcgcg ccttaattaa tc

32

<210> 3
<211> 34
<212> DNA
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<400> 3
tacaagctta acaatgggtgc tgtctccggc cgac

34

<210> 4
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<223> Description of Artificial Sequence: Homo sapiens

<400> 4
cgggtccacc cggagcttgt g

21

<210> 5
<211> 21
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Homo sapiens

<400> 5
cacaagctcc ggggtggaccc g

21

<210> 6
<211> 24
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Homo sapiens

<400> 6

tcaacgggtat ttggaggtca gcac

24

<210> 7

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Homo sapiens

<400> 7

gtcattaatt aacaatggtg cacctgactc ctgaggagaa gtcggccgtt ac

52

<210> 8

<211> 43

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Homo sapiens

<400> 8

aatgagctcg ttaacqcggt tagtgatact tgtgggccag ggc

43

<210> 9

<211> 162

<212> DNA

<213> Nicotiana plumbaginifolia

<400> 9

atggcttctc ggaggttctc cgctctctc ctccgtcaat cggctcaacg tggcggcggt 60
ctaatttccc gatcgtagg aaactccatc cctaaatccg cttcacgcgc ctcttcacgc 120
gcacccccta agggattcct cttaaaccgc gccgtacagt ac 162

<210> 10

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Nicotiana
plumbaginifolia

<400> 10

cgcaagctta acaatggctt ctcggaggct tctc

34

<210> 11

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic:
Nicotiana plumbaginifolia and Homo sapiens

<400> 11

tagaattcgg ccggagacag cacgtactgt acggcgcggt ttaag

45

<210> 12

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Nicotiana
plumbaginifolia

<400> 12

gtcattaatt aacaatggct tctcggaggc ttctcgcctc tc

42

<210> 13

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic:
Nicotiana plumbaginifolia and Homo sapiens

<400> 13

aatgagctcg gccgacttct cctcaggagt caggtgcacg tactgtacgg cgcggtttaa 60
g 61

<210> 14

<211> 171
<212> DNA
<213> Pisum sativum

<400> 14
atggttctta tgatattctc ttcagctgtg actacagtca gccgtgcttc tacgggtgcaa 60
tcggccgcgg tggctccatt cggcggcctc aaatccatga ctggattccc agttaagaag 120
gtcaacactg acattacttc cattacaagc aatggtggaa gagtaaagtg c 171

<210> 15
<211> 39
<212> DNA
<213> Artificial Sequence

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<400> 15
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<210> 16
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
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Pisum sativum and Homo sapiens

<400> 16
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<210> 17
<211> 44
<212> DNA
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<223> Description of Artificial Sequence: Pisum sativum

<400> 17
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<210> 18

<211> 57

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic:
Pisum sativum and Homo sapiens

<400> 18

aatgagctcg gccgacttct cctcaggagt caggtgcacg cactttactc ttccacc 57

<210> 19

<211> 69

<212> DNA

<213> Ipomoea batatas

<400> 19

atgaaagcct tcacactcgc tctcttctta gctctttccc tctatctcct gcccaatcca 60
gcccatctcc 69

<210> 20

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Ipomoea
batatas

<400> 20

cgcaagctta acaatgaaag ccttcacact cgc 33

<210> 21

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic:
Ipomoea batatas and Homo sapiens

<400> 21

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<210> 22
<211> 34
<212> DNA
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<223> Description of Artificial Sequence: Ipomoea
batatas

<400> 22
gtcattaatt aacaatgaaa gccttcacac tcgc 34

<210> 23
<211> 61
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic:
Ipomoea batatas and Homo sapiens

<400> 23
aatgagctcg gccgacttct cctcaggagt caggtgcacg gaatgggctg gattgggcag 60
g 61

<210> 24
<211> 12
<212> DNA
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<220>
<223> Description of Artificial Sequence: Homo sapiens

<400> 24
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<210> 25
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Homo sapiens

<400> 25

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44

<210> 26

<211> 55

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Homo sapiens

<400> 26

aatgagctcg ttaacgcgtt tatagctcat cttgtgata cttgtgggcc agggc 55

<210> 27

<211> 111

<212> DNA

<213> Ipomoea batatas

<400> 27

atgaaagcct tcacactcgc tctcttctta gctctttccc tctatctcct gcccaatcca 60
gccattcca ggttcaatcc catccgcctc cccaccacac acgaaccgc c 111

<210> 28

<211> 43

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic:
Ipomea batatas and Homo sapiens

<400> 28

tagaattcgg ccggagacag cacggcgggt tcgtgtgtgg ttg 43

<210> 29

<211> 59

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic:
Ipomea batatas and Homo sapiens

<400> 29

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<210> 30

<211> 423

<212> DNA

<213> Homo sapiens

<400> 30

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gctggcgagt atggtgcgga ggccctggag aggatgttcc tgccttccc caccaccaag 120
acctacttcc cgcacttcga cctgagccac ggctctgccc aggttaagg ccacggcaag 180
aaggtggccg acgcgctgac caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg 240
tccgccctga gcgacctgca cgcgcacaag cttcgggtgg acccgggtcaa cttcaagctc 300
ctaagccact gcctgctggt gacctggcc gccacctcc ccgccgagtt caccctgcg 360
gtgcacgcct ccctggacaa gttcctggct tctgtgagca ccgtgctgac ctccaaatac 420
cgt 423

<210> 31

<211> 141

<212> PRT

<213> Homo sapiens

<400> 31

Val Leu Ser Pro Ala Asp Lys Thr Asn Val Lys Ala Ala Trp Gly Lys
1 5 10 15
Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg Met
20 25 30
Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp Leu
35 40 45
Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala Asp
50 55 60
Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala Leu
65 70 75 80
Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro Val
85 90 95
Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala His
100 105 110
Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys Phe
115 120 125

Leu Ala Ser Val Ser Thr Val Leu Thr Ser Lys Tyr Arg
 130 135 140

<210> 32
 <211> 438
 <212> DNA
 <213> Homo sapiens

<400> 32
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 gatgaagttg gtggtgaggc cctgggcagg ctgctggtg tctacccttg gacccagagg 120
 ttctttgagt cctttgggga tctgtccact cctgatgctg ttatgggcaa ccctaaggtg 180
 aaggctcatg gcaagaaagt gctcggtgcc ttagtgatg gcctggctca cctggacaac 240
 ctcaagggca cctttgccac actgagttag ctgactgtg acaagctgca cgtggatcct 300
 gagaacttca ggctcctggg caacgtgctg gtctgtgtgc tggcccatca ctttggcaaa 360
 gaattcacc caccagtga ggctgcctat cagaaagtgg tggctggtg ggctaatagcc 420
 ctagcccaca agtatcac 438

<210> 33
 <211> 146
 <212> PRT
 <213> Homo sapiens

<400> 33
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 Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu
 20 25 30
 Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
 35 40 45
 Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
 50 55 60
 Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
 65 70 75 80
 Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys Leu
 85 90 95
 His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Cys
 100 105 110

